

L14 ANSWER 2 OF 4 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN  
AN 2003-15163 BIOTECHDS  
TI **Pseudomonas** sp. WAK-1 produced sulfated **polysaccharides**  
for use in antitumor agents for treating e.g. breast cancer, melanoma,  
ovarian cancer, stomach cancer and **prostate cancer**;  
**polysaccharide** preparation by bacterium fermentation for  
disease therapy

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DT Patent  
LA Japanese  
OS WPI: 2003-381447 [36]  
AB DERWENT ABSTRACT:

NOVELTY - Sulfated **polysaccharides** comprising a structural unit  
(I) and their pharmaceutically-acceptable salts, are new.

DETAILED DESCRIPTION - Sulfated **polysaccharides** comprise a  
structural unit of formula (I). Galp = galactopyranose residue Glcp =  
glucopyranose residue. INDEPENDENT CLAIMS are also included for: (1)  
producing the sulfated **polysaccharides** or their  
pharmaceutically-acceptable salts by culturing **Pseudomonas** sp.  
WAK-1 in a nutrient source-containing medium after inoculation, and  
collecting the product from the cultured material; (2) substances  
formulated from the sulfated **polysaccharides** or their  
pharmaceutically-acceptable salts as active ingredient to effect changes  
in the function of cells sensitive to their physiological activities; and  
(3) the use of sulfated **polysaccharides** to effect changes in  
the function of cells sensitive to their physiological activities.

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - None given. No suitable data given.

USE - The produced **polysaccharides**, with anticancer  
activity, are for use in antitumor agents for treating e.g. breast  
cancer, melanoma, ovarian cancer, stomach cancer and **prostate**  
**cancer**.

ADMINISTRATION - Administration is oral or non-oral, e.g. at 0.01 mg  
to 1 g by i.v.

ADVANTAGE - Such compounds are obtainable in large quantities, which  
is highly safe, with acute toxicity of 5 g/kg.

EXAMPLE - **Pseudomonas** sp. WAK-1 was cultured in a medium  
containing 0.5% peptone and 0.1% yeast extract, at 28 degrees C for 72  
hours with agitation. After work-up and ion-exchange chromatographic  
purification on DEAE cellulose column, 53 mg of sulfated  
**polysaccharides** was obtained (from 500 ml fermentation liquor):  
characterization by polarimetry, NMR and GC-MS. Antitumor activity of the  
sulfated **polysaccharides** was confirmed (e.g. against breast  
cancer HBC-4). (41 pages)